## Annual Summary 1998

Varicella Surveillance Project
Los Angeles County Department of Health Services

April 30, 1999

Prepared by:

T. Maupin, G. Goldman, C. Peterson, L. Mascola

## Contents

Methodology		1
Summary of Methodology	1	
Reporting Sources	2	
Reported Cases		3
Source of Report		4
Source of Report by Age Group	5	
Surveillance Data		6
Seasonal Trend	6	
Age Distribution/Incidence	7	
Race Ethnicity	9	
Gender	11	
Grading of Lesion Severity	12	
Household Clusters	14	
Severity of Disease Index	15	
Complications	17	
Vomiting and Diarrhea	18	
Temperature	19	
Medications Received During Varicella	20	
Hospitalizations	21	
Sequelae	24	
Varicella in Previously Vaccinated Persons	25	
Varicella Outbreaks	28	
Missed School and Missed Work	28	
Suspected Source of Varicella Infection	29	
Source of Diagnosis	30	
Source of Clinical Information	31	
History of Previous Varicella	31	
Household Cases	32	
Secondary Family Attack Rate	32	
Varicella Vaccine in Study Population		34
Evaluation		37
		57
Reporting Completeness	37	
Capture-Recapture Estimate	37	
Under-Reporting Estimates	39	
Quality Control	40	

Prior Varicella Study	41
Chronological Summary of Work Completed in 1998	42
Projections	46

## **Tables**

1.	Number and Type of Participating Surveillance Units by Year, VSP, 1995-1998	2
2.	Status of Reported Varicella Cases by Year, VSP, 1995-1998 and Cumulative	3
3.	Source of Varicella Case Reports by Year, VSP, 1995-1998 and Cumulative	4
4.	Source of Varicella Case Report by Age Group, VSP, 1998	5
5.	Reported Cases and Incidence Rates of Varicella per 1,000 Population by Age Group, VSP, 1995-1998	8
6.	Reported Cases of Varicella and Age-Adjusted Incidence Rates Per 1,000 Population by Race/Ethnicity, VSP, 1995-1998	9
7.	Varicella Incidence Rates per 1,000 Population by Age Group and Race/Ethnicity, VSP, 1998	9
8.	Reported Varicella Cases by Age and Gender, VSP, 1997 and 1998	11
9.	Grading of Varicella Lesion Severity by Year, VSP, 1995-1998	12
10.	Grading of Varicella Lesions by Age, VSP, 1995-1998 and Cumulative	13
11.	Varicella Lesion Severity and Order of Illness Onset Within Households, VSP, 1995-1998 Combined	15
12.	Severity of Disease Index by Year, VSP, 1995-1998	15
13.	Health Care Providers-Diagnosed Complications by Age Group, VSP, 1998	17
14.	Major Complications by Age Group, VSP, 1998	18
15.	Reported Occurrence of Vomiting and Diarrhea by Year, VSP, 1996 - 1998	18
16.	Maximum Recorded Temperature by Year, VSP, 1995-1998	19

17.	Maximum Recorded Temperature <u>&gt;</u> 101°F by Age Group, VSP, 1998	19
18.	Medications Received During Varicella, VSP, 1995-1998	20
19.	Medications Received During Varicella by Age Group, VSP, 1998	19
20.	Age Distribution of Hospitalized Varicella Cases and Rates of Hospitalization, VSP, 1995-1998	22
21.	Hospitalized Varicella Cases by Diagnosis and Age Group, VSP, 1995-1998 Combined	23
22.	Pre-existing Conditions in Hospitalized Cases Less Than 20 Years of Age and 20 Years of Age and Older, VSP, 1995-1998 Combined	24
23.	Varicella-Like Rash in Vaccine Recipients <42 days and >42 days After Vaccination, VSP, 1996-1998	25
24.	Summary of Varicella Cases Occurring >42 days After Receipt of Varicella Vaccine, VSP, 1996-1998	26
25.	Month of Vaccination of Breakthrough Cases, 1995-1998	27
26.	Varicella Outbreaks, 1995-1998	28
27.	Missed School and Work Days for Varicella Cases and Caretakers, VSP, 1995-1998, Combined	28
28.	Suspected Source of Varicella Infection by Year, VSP, 1995-1998	29
29.	Source of Varicella Diagnosis by Year, VSP, 1995-1998	30
30.	Varicella Cases that Consulted a Health Care Provider byTelephone Only or by Office Visit, VSP, 1996-1998	30
31.	Source of Clinical Information by Year, VSP, 1995-1998	31
32.	History of Previous Varicella by Year, VSP, 1995-1998	31
33.	Household Cases with Two or More Cases of Varicella, VSP, 1995-1998	32
34.	Secondary Family Attack Rate, VSP, 1997-1998	32
35.	Susceptible Family Members by Age Group, VSP, 1997-1998	33
36.	Total Varicella Vaccine Doses Administered by Age, Antelope Valley, 1995-1998 and Combined Years,	35

37.	Varicella Immunization Doses Administered by Provider Type, Antelope Valley, 1995-1998	35
38.	Varicella Immunization Doses Administered by Provider Type Purchasing Vaccine Exclusively Under CDC Contract, Antelope Valley, 1997-1998	36
39.	Age Distribution of Varicella Vaccine Recipients who Received the Vaccine from Providers Obtaining Vaccine Exclusively under CDC Contract, VSP, 1997 - 1998	36
40.	Source of Report for Varicella Cases Two- to Eighteen-year-olds by Surveillance Unit Type, VSP, 1998	37
41.	Structure of Population with Two Sources of Ascertainment	38
42.	Capture-Recapture Estimates of Two- to Eighteen-year-olds Based on Two Ascertainment Groups, 'Schools' and 'Providers', VSP, 1995-1998	38
43.	Cases Known and Reported by Surveillance Unit Type, VSP, 1996-1998	40

## Figures

1.	1995-1998	6
2.	Reported Cases of Varicella by Age Group, 1995-1998	7
3.	Expected vs. Reported Annual Varicella Incidence, VSP, 1995-1998 and U.S	8
4.	Incidence Rates (Cases Per 1,000 Population) by Age Group and Race/Ethnicity, 1998	10
5.	Female-to-Male Rate Ratio by Age Group, 1995-1998	11
6.	Percentage of Primary and Secondary Cases by Age Group, VSP, 1995-1998 Combined	14
7.	Severity of Disease Index >2 by Age Group, VSP, 1995-1998 Combined	16
8.	Proportion of Varicella Cases with Maximum Recorded Temperature > 101°F by Age Group, VSP, 1995-1998	20
9.	Reported Cases of Hospitalized Varicella by Age Group and Cumulative Annual Hospitalization Rate per 1,000 Cases, VSP, 1995-1998 Combined	22
10.	Suspected Source of Varicella Infection by Age Group, VSP, 1995-1998, Combined	29
11.	Varicella Vaccine Doses Administered by Quarter, VSP, 1995-1998	34

- 1 Census Population Estimates by Age, Antelope Valley, VSP, 1995-1997
  Census Population Estimates by Race, Antelope Valley, VSP, 1995-1997
  Census Population Estimates By Race and Age, Antelope Valley, VSP, 1995
  Census Population Estimates By Race and Age, Antelope Valley, VSP, 1996
  Census Population Estimates By Race and Age, Antelope Valley, VSP, 1997
- 2 Source of Varicella Case Reports by Surveillance Unit Type and Age Group, VSP, 1995
  - Source of Varicella Case Reports by Surveillance Unit Type and Age Group, VSP, 1996
  - Source of Varicella Case Reports by Surveillance Unit Type and Age Group, VSP, 1997
- 3 Census Population Estimates by Race for Five- to Nineteen-Year-Olds, Antelope Valley, VSP, 1995-1997
  - Public School Enrollment by Race According to CBEDS, Antelope Valley, VSP, 1995

    Public School Enrollment by Race According to CBEDS, Antelope Valley, VSP, 1996

    Public School Enrollment by Race According to CBEDS, Antelope Valley, VSP, 1997
- 4 Grading of Lesion Definition
- **5** Severity of Disease Index Definition
- 6 Healthcare Provider-Diagnosed Complications by Age Group, VSP, 1995
  Healthcare Provider-Diagnosed Complications by Age Group, VSP, 1996
  Healthcare Provider-Diagnosed Complications by Age Group, VSP, 1997
- 7 Prior Varicella Survey
- 8 COMPARE Analysis, VSP, 1995-1998